BOSTER BIOLOGICAL TECHNOLOGY
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Anti-LKB1 Rabbit Monoclonal Antibody

Catalog Number: M00217-4

About STK11

Tumor suppressor serine/threonine-protein kinase that controls the activity of AMP-activated protein kinase (AMPK) family members, thereby playing a role in various processes such as cell metabolism, cell polarity, apoptosis and DNA damage response. Acts by phosphorylating the T-loop of AMPK family proteins, thus promoting their activity: phosphorylates PRKAA1, PRKAA2, BRSK1, BRSK2, MARK1, MARK2, MARK3, MARK4, NUAK1, NUAK2, SIK1, SIK2, SIK3 and SNRK but not MELK. Also phosphorylates non- AMPK family proteins such as STRADA, PTEN and possibly p53/TP53. Acts as a key upstream regulator of AMPK by mediating phosphorylation and activation of AMPK catalytic subunits PRKAA1 and PRKAA2 and thereby regulates processes including: inhibition of signaling pathways that promote cell growth and proliferation when energy levels are low, glucose homeostasis in liver, activation of autophagy when cells undergo nutrient deprivation, and B-cell differentiation in the germinal center in response to DNA damage. Also acts as a regulator of cellular polarity by remodeling the actin cytoskeleton. Required for cortical neuron polarization by mediating phosphorylation and activation of BRSK1 and BRSK2, leading to axon initiation and specification. Involved in DNA damage response: interacts with p53/TP53 and recruited to the CDKN1A/WAF1 promoter to participate in transcription activation. Able to phosphorylate p53/TP53; the relevance of such result in vivo is however unclear and phosphorylation may be indirect and mediated by downstream STK11/LKB1 kinase NUAK1. Also acts as a mediator of p53/TP53-dependent apoptosis via interaction with p53/TP53: translocates to the mitochondrion during apoptosis and regulates p53/TP53-dependent apoptosis pathways. In vein endothelial cells, inhibits PI3K/Akt signaling activity and thus induces apoptosis in response to the oxidant peroxynitrite (in vitro). Regulates UV radiation-induced DNA damage response mediated by CDKN1A. In association with NUAK1, phosphorylates CDKN1A in response to UV radiation and contributes to its degradation which is necessary for optimal DNA repair (PubMed:25329316).

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Overview

Product Name	Anti-LKB1 Rabbit Monoclonal Antibody
Reactive Species	Human, Mouse, Rat
Description	This Recombinant Rabbit Monoclonal Antibody detects endogenous levels of LKB1 protein. Validated for research with WB,IF,IP,ELISA applications. Anti LKB1 is reactive for Human, Mouse, Rat samples
Application	ELISA, IP, IF, WB
Clonality	Monoclonal
Formulation	PBS, 50% glycerol, 0.05% Proclin 300, 0.05% stabilizing protein This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.

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Storage Instructions	Store at -20°C/1 year
Host	Rabbit
Uniprot ID	Q15831

Technical Details

Isotype	IgG, Kappa
Purification	Protein A
Suggested Dilutions	WB 1:2000-1:10000 IF 1:200-1:1000 ELISA 1:5000-1:20000 IP 1:50-1:200

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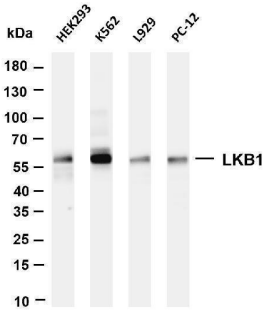
Anti-LKB1 Rabbit Monoclonal Antibody (M00217-4) Images



Various whole cell lysates were separated by 4-20% SDS-PAGE, and the membrane was blotted with anti-LKB1 antibody. The HRP-conjugated Goat anti-Rabbit IgG(H + L) antibody was used to detect the antibody. Lane 1: HEK293 Lane 2: K562 Lane 3: L929 Lane 4: PC-12 Predicted band size: 49kDa Observed band size: 60kDa

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For Research Use Only. Not for use in diagnostic procedures.